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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/747,957	12/27/2000	Tadayoshi Kono	108391-00014	3190

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EXAMINER

VO, TUNG T

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/747,957	KONO ET AL.	
	Examiner	Art Unit	
	Tung Vo	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-12 is/are pending in the application.
- 4a) Of the above claim(s) 4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 9, line 16 “the parameter” fails to show antecedent basis in the previous limitation (lines 3-4, e.g. a parameter of sequence; line 10, e.g. a parameter).

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2 and 9-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Hoshi (US 6,181,746 B1).

Re claims 1 and 9, Hoshi discloses an MPEG video decoder for an MPEG bit stream into which a plurality of pictures and a plurality of parameters of each layer are encoded, the parameters

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including a parameter of a sequence layer representing any one of a horizontal size and a vertical size of the pictures the MPEG video decoder (fig. 5) comprising: an image decoding section (10, 14, 16 of fig. 5) which decodes the MPEG bit stream to obtain the pictures (I, P, B of fig. 6) and the parameters (Note a sequence managing (14 of fig. 5) for identifying, for example, the type of pictures from the sequence headers of the bit stream of encoded images and providing timing signals necessary for motion compensation and DRAM control (described below) and picture identifying signals); a frame memory (BANK0, BANK1, AND BANK 2 of fig. 6; col. 3, lines 35-45, DRAM 20 of fig. 5) which is connected to the image decoding section and includes a first picture bank (BANK0 of fig. 6) which stores a first picture (I2 of fig. 6, Note I2 is a decoded first picture being stored in the bank 1) currently obtained by the image decoding section; a first parameter bank (I2 of fig. 6, Note I2 is inter frame as considered parameter) which is associated with the first picture bank and stores first parameters for displaying the first picture (oI2 is a displayed picture); a second picture bank (BANK1 of fig. 6) which stores a second picture (B3 of fig. 6) obtained by the image decoding section immediately before the first picture; and a second parameter bank (B3 of fig. 6, Note B3 is a bidirectional frame as considered parameter) which is associated with the second picture bank and stores second parameters for displaying the second picture; a decode control section (14 of fig. 5) which controls the image decoding section; and a display control section (18 and 20 of fig. 5) which is connected to the decode control section and to the frame memory, and carries out a display control of the first picture and the second picture based on the first parameters and the second parameters, respectively; wherein the first parameters and the second parameters include an identical parameter (MPEG standard obtains I, B, and P frames that are in a sequence layer or GOP layer) of the sequence layer, and

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for displaying the second picture by overwriting a part of the first parameters with the parameter (col. 4, lines 12-16; and col. 8, lines 51-60).

Re claim 2, Hoshi further discloses a status register (fig. 7) which indicates a status of the first picture bank and the second picture bank (col. 5, lines 4-67), the decode control section updates the status register any one of the first and the second picture is obtained, and the display control section updates the status register when any one of the first picture and the second picture is displayed (col. 6, lines 7-35).

Re claims 10-12, Hoshi further discloses the second parameters are read from a memory area that is to store the second parameters (fig. 6), wherein the layer includes at least one layer of a GOP layer and a picture layer (MPEG standard, col. 4, lines 1-2).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 and 5-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takabatake et al. (US 6,320,909) in view of Mendenhall et al. (US 6,424,381 B1).

Re claims 1-3, 5, and 9-10, Takabatake discloses an MPEG video decoder for an MPEG bit stream into which the MPEG bit stream to obtain the picture and parameters of each layer are encoded, wherein the parameters include parameters of a sequence layer, the parameters of the sequence layer includes a horizontal size value and a vertical size value of the picture, the MPEG

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video decoder (fig. 1) comprising: an image decoding section (10 of fig. 1) which decodes the MPEG bit stream to obtain the pictures (GOP, I, P, and B pictures) and the parameters (parameter is the frame type information (data structure information) that indicates whether decoded frames are I or P frames or B frames (col. 15, lines 58-65)), and a frame memory (12 of fig. 1) connected to the image decoding section includes; a first picture bank (32 of fig. 1) which stores a first picture currently obtained by the image decoding section (col. 16, lines 9-16); a first parameter bank which associated with the first picture with the first bank and stores first parameter for displaying the first picture (col. 16, lines 9-31, Note write addresses by the memory interface unit 16 of fig. 1); a second picture bank (34 of fig. 1) which stores a second picture obtained by the image decoding section immediately before the first picture (col. 26, lines 31-33, Note said control means delays the start timing of decoding the pixel data of a B picture immediately following another B picture); second parameter bank which associated with the second picture bank and stores second parameters for displaying the second picture (col. 16); a decode control section (14 of fig. 1) which controls said the image decoding section; a display control section (20 of fig. 1) connected to the decode control section and to the frame memory, wherein the display control section carries out a display control the picture stored in the frame memory based on the parameters (picture header) stored in said the frame memory; and a status register indicates a data storage state of each bank (32, 34, and 36 of fig. 1, storing I, P, and B), and the decode control section (14 of fig. 1) updates said the status register when the picture is obtained, and said the display control section (20 of fig. 1) updates said the status register when the picture is displayed (Note In a period T1, the decoding/display circuit DDC is supplied with picture data of an I picture I3, to decode the data. The decoded picture data of the I picture I3 are

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written in the bank #1 (BA1) of the memory device MR. Upon completion of the period T1, the bank #1 stores all pixel data of the I picture I3); and the first parameters and the second parameters include an identical parameter (Note according MPEG standard, I, B, and P frames are in the same sequence layer or GOP layer) of the sequence layer.

It is noted that Takabatake suggests that decoding section (10 of fig. 1) for transferring the decoded picture and parameters (type picture information and macroblocks headers) to the memory (12 of fig. 1) as a data transfer path for transferring the picture from the image decoding section to said the frame memory also works as a data transfer path for transferring the parameters of each layer between said the image decoding section and said frame memory (14 and 16 of fig. 1, Note control transferring the decoded picture from the frame memory to the display).

However, Takabatake does not particularly disclose an internal buffer for temporarily storing the picture, the parameters, and macro-blocks as claimed.

Mendenhall teaches wherein said internal buffer also works as a buffer for temporarily storing the decoded parameters of each layer (col. 7, lines 20-30; Note the decoder (130 of fig. 6) includes buffers for storing the decoded image and each of the syntax layers).

Therefore, taking the teachings of Takabatake and Mendenhall as a whole, it would have been obvious to one of ordinary skill in the art to incorporate the decoding buffer of Mendenhall into the image decoding section of Takabatake for temporally storing the decoded images and transferring to the memory. Doing so would control the decoding efficiency.

Re claim 6, Takabatake further teaches wherein decoding section decodes the MPEG bit stream to obtain first parameters and overwrites second parameters obtained immediately before

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with the first parameters (fig. 17; Note Overwriting of the pixel data is prevented in bank #3 (see FIG. 1) for storing B frames).

Re claim 7 Takabatake further teaches wherein said the decode control section operates asynchronously with a vertical synchronization signal, and said the display control section operates in synchronism with the vertical synchronization signal (HSYNC and VSYNC of fig. 1).

Re claim 8, Takabatake further teaches wherein control section does not update said the status register wherein a reference picture of other pictures is displayed (while the reference pictures is displayed, the control section does not perform of updating).

Re claims 11 and 12, Takabatake further teaches MPEG stream that includes at least one layer of a GOP layer, sequence layer, and picture layer (fig. 29).

In the remarks filed 04/10/2006, the applicant argued that Takabatake does not disclose or suggest an MPEG video decoder into which a plurality of pictures and a plurality of parameters of each layer are encoded comprising first parameters for displaying a first picture and second parameters for displaying a second picture, wherein the first parameters and the second parameters include an identical parameter of the sequence layer, as claimed in amended claims 1 and 9.

The examiner respectfully disagrees with that applicant. It is submitted that Takabatake teaches an MPEG video decoder (fig. 1) which a plurality of pictures (MPEG standard obtains I, P, and B pictures) and a plurality of parameters (Picture, Slice, and Macroblock headers are frame type information considered as parameters, see figures 27-29) of each layer (MPEG has sequence layer, slice layer, macroblock layer, see figures 27-29) are encoded (MPEG bit stream

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is encoded, ENCODED PICTURE DATA of fig. 1) Comprising first parameters (Note the frame type information indicates I frames, 14 of fig. 1 for identifying the frame type information) for displaying a first picture (I or P frames) and second parameters (the frame type information indicates B frame) for displaying a second picture (B frame is displayed), wherein the first parameters and the second parameters include an identical parameter (Note MPEG standard obtains I, B, and P frames that are in the same sequence layer or GOP layer, see figure 29, this means the first parameters and the second parameters include the identical parameter) of the sequence layer. In view of the discussion above, the claimed features are unpatentable over Takabatake.

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

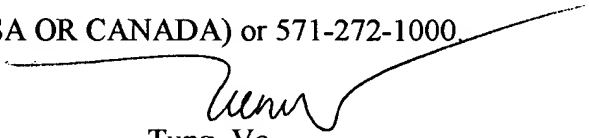
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Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung Vo whose telephone number is 571-272-7340. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Tung Vo
Primary Examiner
Art Unit 2621